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NOTES ON THE ORTHOPTERA OF NEW MEXICO AND WESTERN TEXAS

BY JAMES A. G. REHN.

The great part of the material on which this study is based was collected for the Academy in the spring and early summer of 1902 by Mr. H. L. Viereck and the author. All specimens from Ysleta and El Paso, Tex., and Alamogordo, Cludcroft and Highrolls, N. M., were thus collected. A general geographical and biotic study of the localities in the Sacramento mountain region, New Mexico, will be published later in these *Proceedings*.

Specimens belonging to the United States National Museum were examined in conjunction with the Academy material, and such specimens are designated in this paper by the initials of that institution. The loan of this material was secured through the kindness of Mr. W. H. Ashmead. The fine recent work by Messrs. Scudder and Cockerell¹ on the Orthoptera of New Mexico has proven of great value in studying this collection.

Family BLATTIDÆ.

Homœogamia subdiaphana Scudder.

Ten males, one female.

Alamogordo, Otero county, N. M. April 11, May 5 and June 6 and 7, 1902.

Highrolls, Otero county, N. M. June 8, 1902.

As the female of this species has not been described I append a short description:

Form ovate, the abdomen very broad. Pronotum similar to that of the male in general outline. Supraanal plate transverse, the posterior margin rounded and centrally emarginate.

General color wood-brown, edged on the pro- and mesonotum with ochraceous. Pro-, meso- and metanotum centrally ornamented with blotches of ochraceous, the penultimate abdominal segment bearing lateral blotches of the same tint.

¹ *Proc. Davenport Acad. Sci.*, IX, pp. 1-60, 1903.

Measurements.

Total length,	11.5 mm.
Length of pronotum,	4 "
Width of pronotum,	6 "
Width of abdomen,	8 "

The first specimen of this species secured was taken while flitting along a roadside through mesquite (*Prosopis*) and greasewood (*Larrea*) brush. Several specimens were subsequently taken near the same spot, but the remainder were all taken at light.

Family **MANTIDÆ**.**Litaneutria minor** (Scudder).

One immature specimen.

Alamogordo, Otero county, N. M. May 1, 1902.

Family **PHASMIDÆ**.**Diapheromera** sp.

One immature specimen.

Alamogordo, Otero county, N. M. April 23, 1902.

Family **ACRIDIDÆ**.Subfamily **Acrydiinæ**.**Paratettix toltecus** (Saussure).

Male and female.

Highrolls, Otero county, N. M. May 29 and 31, 1902.

Tettigidea lateralis (Say).

One female.

Sacramento mountains, N. M., 5,000 feet elevation. October 4, collected by C. H. T. Townsend (U. S. N. M.).

Subfamily **Acridinæ**.**Opeia obscura** (Thomas).

Two females.

Sacramento mountains, N. M., 6,000 feet elevation. October 2, C. H. T. Townsend (U. S. N. M.).

Cordillacris² occipitalis (Thomas).

One female.

Alamogordo, Otero county, N. M. April 9, 1902.

² For use of this name in place of *Alpha* Brunner, see Rehn, *Canad Ent.*, XXXIII, p. 271.

Orphulella salina Scudder.

One female.

Sacramento mountains, N. M., 5,000 feet elevation. October 4, C. H. T. Townsend (U. S. N. M.).

Gomphoerus clavatus Thomas.

One male.

Cloudcroft, Otero county, N. M. May 24, 1902.

Psolæssa maculipennis Scudder.

Three males.

Alamogordo, Otero county, N. M. May 8 and 30, 1902.

One male.

La Cueva, Organ mountains, Donna Ana county, N. M., about 5,300 feet elevation. August 30, C. H. T. Townsend.

Psolæssa ferruginea Scudder.

Two males.

Alamogordo, Otero county, N. M. May 5 and 30, 1902.

Stirapleura pusilla Scudder.

Four males, eight females.

Alamogordo, Otero county, N. M. April 14, 24 and 26, May 9 and 30, 1902.

Highrolls, Otero county, N. M. June 3 and 11, 1902.

Stirapleura mescalero n. sp.

Type; ♀.

Highrolls, Otero county, N. M. June 9, 1902.

Allied to *S. tenuicarina* and *pusilla* Scudder, but differing from the former in the non-sulcate frontal costa, the carinate vertex, rectangulate fastigium and the shorter wings, and from the latter in the non-sulcate frontal costa, the carinate vertex, the subtrigonal lateral foveolæ and the shallower mesosternal lobes.

Form rather heavily built. Head with the vertex slightly tumescent and bearing a marked median carina; fastigium subelliptical and considerably excavated, the margins well raised and rectangulate anteriorly, the carina of the vertex being continued forward over the greater portion of the fastigium; lateral foveolæ subtrigonal, the antero-superior angle being subobsolete; frontal costa strongly constricted superiorly and also to a slight degree above the ocellus, lateral margins expanding inferiorly and becoming obsolete, the entire length plane and non-sulcate, the section inferior to the

ocellus being rather heavily punctate; eyes subovate, but slightly longer than the infraocular portion of the genæ; antennæ not equaling head and pronotum in length. Pronotum moderately constricted mesially, the lateral carinæ being considerably expanded both anteriorly and posteriorly; median carina distinct, cut very slightly before the middle; posterior margin of the pronotum obtuse-angulate, the apex well rounded; lateral lobes subequal in width, the lower margin sinuate anteriorly, the surface finely granulate. Tegmina slightly exceeding the abdomen in length. Mesosternal lobes rather deep, considerably deeper than half the width of the interspace.

General color reddish-brown, the sides of the head, upper portions of the lateral lobes of the pronotum, pleuræ and V markings on the upper surface of the hind femora much darker in intensity than the general upper surface. Lower surface pale yellowish. Tegmina with traces of quadrate maculations in the distal half.

Measurements.

Length of head and body,	24.5 mm.
Length of pronotum,	4 "
Length of tegmina,	15.5 "
Length of hind femora,	12.5 "

Subfamily *Œdipodinæ*.

Arphia teprata Scudder.

Twenty-one males, nine females.

Alamogordo, Otero county, N. M. April 30, May 4, 5, 6, 8, 9, 12 and 16, 1902.

Highrolls, Otero county, N. M. May 29, June 2, 3, 12 and 13, 1902.

Encoptolophus costalis (Scudder).

One male.

Ysleta, El Paso county, Tex. April 2, 1902.

Encoptolophus parvus Scudder.

Twenty-four males, twenty-five females.

Sacramento mountains, N. M., 6,500 feet elevation. C. H. T. Townsend (U. S. N. M.).

Hippiscus corallipes (Haldeman).

Three males, four females, one immature.

Highrolls, Otero county, N. M. May 29, June 1 and 2, 1902.

Hippiscus zapotecus (Saussure).

One male, three females.

Highrolls, Otero county, N. M. June 11, 1902.

This species is very closely related to *H. corallipes* and quite difficult to separate.

Hippiscus pumilus Scudder.

Fourteen males, one female.

Cloudcroft, Otero county, N. M. May 21, 22, 23 and 24, 1902.

Only previous New Mexican record from Taos Valley, northern New Mexico.

Tropidolophus formosus (Say).

One female.

Luñas Well, Sacramento mountains, N. M. September 29, C. H. T. Townsend (U. S. N. M.).

Dissosteira carolina (Linnaeus).

One male, two females.

Sacramento mountains, N. M., 5,000-6,500 feet elevation.

October 3 and 4, C. H. T. Townsend (U. S. N. M.).

Lactista boscanus n. sp.

Type; female.

Ysleta, El Paso county, Tex. April 2, 1902.

Apparently allied to *L. pellepidus* Saussure, but differing in the lineato-rugose pronotum, the acute-angulate posterior process of the pronotum, and in the hyaline and unclouded margin of the apex of the wing.

General form deep, compressed. Head with the fastigium broad and very shallow, the margins but slightly elevated, anteriorly truncate; vertex rugose and bearing a central carina, which extends a considerable distance forward on the fastigium; frontal costa rather broad, expanded above the ocellus, non-sulcate, heavily punctate; eyes ovate, about equal to the infraocular portion of the genae. Pronotum with the metazone lineato-rugose, the lateral lobes with comparatively slight rugosities; median carina low, most elevated on the prozona, the transverse sulcus well marked; posterior angle acute, the margin subconcave; posterior angle of the lateral lobes rotundate. Tegmina elongate, the costal field strongly developed basally. Posterior femora robust, the lower carina well developed but not strongly arched; posterior tibiæ shorter than the femora.

General color dull ashy-brown, dirty yellowish beneath; limbs and eyes suffused with reddish brown; antennæ dull brownish, finely punctate with a darker tint. Tegmina with faint traces of basal, median and pre-apical bands. Wings with the disk pale yellowish, the fuscous band rather broad, involving the posterior margin and sending out a rather broad but short humeral spur; apex hyaline, the nervures fuscous, the margins unclouded except the costal portion. Posterior tibiæ grayish-blue, with a dull glaucous pre-genicular annulus; spines basally glaucous, terminally black.

Measurements.

Length of head and body,	21	mm.
Length of pronotum,	6	"
Length of tegmina,	22	"
Length of hind femora,	12.5	"

***Mestobregma asperum* (Scudder).**

Twenty-four males, twenty-five females.

Sacramento mountains, N. M., 6,500 feet elevation. October, C. H. T. Townsend (U. S. N. M.).

***Trimerotropis melanoptera* McNeill.**

Two males.

Sacramento mountains, N. M., 6,500 feet elevation. October 3, C. H. T. Townsend (U. S. N. M.).

Only previous record is the type locality—Silver City (Bruner).

***Trimerotropis vineulata* Scudder.**

Seventy-five males, fifty females.

Sacramento mountains, N. M., 6,000–6,500 feet elevation. October 2 and 3, C. H. T. Townsend (U. S. N. M.).

Alamogordo, Otero county, N. M. April 9–30, May 1–16, June 7 and 9, 1902.

Highrolls, Otero county, N. M. May 29, 31, June 2 and 11, 1902.

Cludcroft, Otero county, N. M. June 18, 1902.

El Paso, Tex. April 5 and 6, 1902.

***Cirroptettix undulatus* (Thomas).**

Six males, twenty-four females.

Cludcroft, Otero county, N. M. June 16–20, 1902.

Beulah, San Miguel county, N. M. August 17, 1901. Dr. Henry Skinner.

***Heliastus aridus* (Bruner).**

Forty-one males, nineteen females.

Alamogordo, Otero county, N. M. April 10–May 16, 1902.

Highrolls, Otero county, N. M. May 31, 1902.

Ysleta, El Paso county, Tex. April 2, 1902.

This species exhibits an enormous range of color variation, varying from an extreme rusty form with a bluish cast to the tegmina, to a dull bluish-black form with an ashy suffusion on the head. Some specimens have the hind femora, wings and pronotum with strong maculations, while others are almost immaculate.

When at rest on the *Larrea* and mesquite plains this species is very hard to detect, and is frequently unnoticed until it is almost trampled under foot. The habitat of this species appears to be a purely desert one.

***Brachystola magna* (Girard).**

One male, two females.

Organ mountains, Donna Ana county, N. M. September 27, C. H. T. Townsend (U. S. N. M.).

Sacramento mountains, N. M., 6,500 feet elevation. October 3, C. H. T. Townsend (U. S. N. M.).

***Phrynotettix³ tshivavensis* (Haldeman).**

One male and one female.

Alamogordo, Otero county, N. M. May 13, 1902.

El Paso, Tex. March 31, 1902.

Subfamily *Locustinæ*.***Campylacantha vegana* Scudder and Cockerell.**

One female.

Las Vegas, N. M. August, T. D. A. Cockerell.

***Eoloplus elegans* Scudder.**

One male and one female.

Mesilla valley, Donna Ana county, N. M. October 8, C. H. T. Townsend (U. S. N. M.).

***Eoloplus crassus* Scudder.**

One female.

White Sands, between the Sacramento and San Andreas mountains, N. M. September 30, C. H. T. Townsend (U. S. N. M.).

³ For use of this name in place of *Haldemanella* see Rehn, *Proc. Acad. Nat. Sci. Phila.*, 1902, p. 595.

***Melanoplus lakinus* (Scudder).**

One male.

Sacramento mountains, N. M., 6,500 feet elevation. October 3, C. H. T. Townsend (U. S. N. M.).

***Melanoplus atlanis* (Riley).**

Two males, three females.

Sacramento mountains, N. M., 6,500 feet elevation. October 3, C. H. T. Townsend (U. S. N. M.).

***Melanoplus altitudinum* (Scudder).**

Three females.

Cloudcroft, Otero county, N. M. May 22 and 26, June 17, 1902.

***Melanoplus sapellanus* Scudder.**

One female.

Top of Las Vegas range, San Miguel county, N. M. June 28, 1902, H. L. Viereck.

***Melanoplus femur-rubrum* (De Geer).**

Two males, six females.

Sacramento mountains, N. M., 5,000 feet elevation. October 4, C. H. T. Townsend (U. S. N. M.).

***Melanoplus corpulentus* Scudder.**

Fourteen males, ten females.

Sacramento mountains, N. M., 6,500 feet elevation. October 2 and 3, C. H. T. Townsend (U. S. N. M.).

On comparison with Mexican specimens in the collection of the Academy these prove indistinguishable.

***Melanoplus bivittatus* (Say).**

Two females.

Sacramento mountains, N. M., 6,500 feet elevation. October 3, C. H. T. Townsend (U. S. N. M.).

***Melanoplus thomasi* Scudder.**

Two males, five females.

Sacramento mountains, N. M., 5,000 feet elevation. October 4, C. H. T. Townsend (U. S. N. M.).

This species was recorded from Tularosa only by Scudder and Cockerell (*Proc. Davenport Acad. Sci.*, IX, p. 51), and the locality given above is probably not very far distant from Tularosa, which latter lies about twenty miles to the north of Alamogordo.

Dactylotum variegatum (Scudder).

One female.

Luñas Well, Sacramento mountains, N. M. September 29, C. H. T. Townsend (U. S. N. M.).

The collection of the United States National Museum also contains specimens from Ojo Caliente, Rio Arriba county, N. M., and Huachuca, Cochise county, Ariz.

On a comparison of this species with *D. pictum* (Thomas), it will be seen that practically the only important diagnostic character is the shape of the tegmina.

a.—Tegmina elongate-ovate, at least twice as long as broad, *pictum* (Thomas).

aa.—Tegmina ovate, not more than half as long again as broad, *variegatum* (Scudder).

Family TETTIGONIDÆ.

Ceuthophilus uniformis Scudder.

One male and one female.

Beulah, San Miguel county, N. M. July 10, 1902, T. D. A. Cockerell.

Ceuthophilus pallidus Thomas.

Eighteen males, nineteen females.

Cloudcroft, Otero county, N. M. May 21, 23 and 26, June 19, 1902.

Udeopsylla vierecki n. sp.

Type; male (?).

Cloudcroft, Otero county, N. M. May 27, 1902, H. L. Viereck.

Differing from both previously known species of the genus in the smooth upper surface of the anterior tibiæ and the abbreviate character of the posterior tibiæ, which latter are shorter than the femora. This specimen was found dead and is rather badly mutilated, the extremity of the abdomen, the palpi, the median limbs, the labrum and clypeus, antennæ and the apical joints of the tarsi being badly damaged or gone.

I take great pleasure in dedicating this rather striking form to my friend and fellow-worker, Mr. H. L. Viereck, to whose tireless energy and perseverance the large entomological collection of the Alamogordo and Cloudcroft regions is entirely due.

General form heavy and obese. Head with the vertex but very

slightly raised; eyes subtrigonal, flat. Pronotum broad, the anterior margin slightly emarginate centrally, truncate posteriorly. Metanotum deep, exceeding the mesonotum in lateral depth. Abdomen compressed, subcarinate superiorly. Anterior femora with a well-developed inferior median sulcus, the inner margin bearing one large and two small spines on the distal section; tibiæ flat above, heavily punctate and unarmed, below subsulcate and with three pair of spines, spurs four in number, the anterior external one very short and blunt. Posterior femora stout, the lower sulcus deep, the margins strongly beset with innumerable small teeth, the internal margin bearing the greatest number; tibiæ slightly bowed, the superior surface flat, with four to five pair of spines of the first and a few irregularly scattered spines of the second order, distal portion of the inferior surface with six recumbent spines, the upper pair of spurs slightly the longer.

General color ochraceous, suffused above with reddish-brown, the segments with their posterior borders blackish.

Measurements.

Length of head and body (approximately),	23	mm.
Length of pronotum,	9	"
Breadth of pronotum,	10.2	"
Length of hind femur,	19	"
Length of hind tibia,	17	"

Family **GRYLLIDÆ**.

Subfamily **Gryllinæ**.

Gryllus integer Scudder.

Four males, four females.

Highrolls, Otero county, N. M. May 31, June 2, 11, 13, 1902.

Gryllus alogus n. sp.

Type: ♀; Albuquerque, Bernalillo county, N. M., 1902.
Collected by T. D. A. Cockerell.

Apparently allied to *G. armatus* Scudder,⁴ but differing in the shape of the anterior and lateral margins of the pronotum, and in the different proportions of the calcaria of the hind tibiæ, as well as the coloration. No relationship exists with *G. personatus* Uhler,⁵ or with *mexicanus* Saussure.⁶

⁴ *Psyche*, IX, p. 293.

⁵ *Proc. Ent. Soc. Phila.*, II, p. 547.

⁶ *Miss. Sci. Mex., Orthopt.*, p. 402.

Size rather small and form comparatively slender. Head moderately large, slightly tumid, both on the occiput and genæ; vertex declinate, broad and flattened; eyes oval. Pronotum about once and a half as broad as long, emarginate anteriorly, the posterior border slightly arcuate; lateral margins tumid, surface obscurely punctulate; lateral lobes shallow, the anterior angle obtuse, the lower margin sloping upward and backward to the rounded posterior angle. Tegmina moderately long, not much more than twice as long as the pronotum, the mediastinal view with three branches. Anterior and median limbs rather slight, compressed. Posterior femora moderately heavy, rather attenuate apically; tibiæ two-thirds as long as the femora, armed with 6-8 spines on each margin, the upper inner calcar distinctly shorter than the intermediate one. Ovipositor reaching to the apex of the outstretched metatarsus.

General color blackish-brown, the infraocular portion of the genæ and the humeral angle of the tegmina ochraceous, the veins of the mediastinal area being of the same color. Posterior femora orange-red, becoming dull-brownish posteriorly.

Measurements.

Length of head and body,	17.5 mm.
Length of pronotum,	4 "
Length of tegmina,	9 "
Length of hind femora,	11 "
Length of ovipositor,	15 "

***Miogryllus lineatus* (Scudder)?**

One immature male.

Alamogordo, Otero county, N. M. April 25, 1902.

This specimen is very questionably assigned to this species, and a number of characters show considerable difference from the description. Considering the apparently immature condition of the specimen I think this the best course to adopt.

Subfamily $\text{Œ}canthi\text{æ}$.

***Œcanthus* sp.**

One immature female.

Alamogordo, Otero county, N. M. June 9, 1902.

This species is in all probability undescribed and shows closest relationship with *Œ. niveus* and *angustipennis*.